TAKEO   Q61223
IMAGE CODING-DECODING METHOD...
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RADIATION IMAGE READER

ACQUIRED IMAGE

10

IMAGE CODER-DECODER

71

72
FILM OUTPUT UNIT

62
FILE SERVER

NETWORK 63

82
RESTORATION SECTION

86
OUTPUT-FORMAT
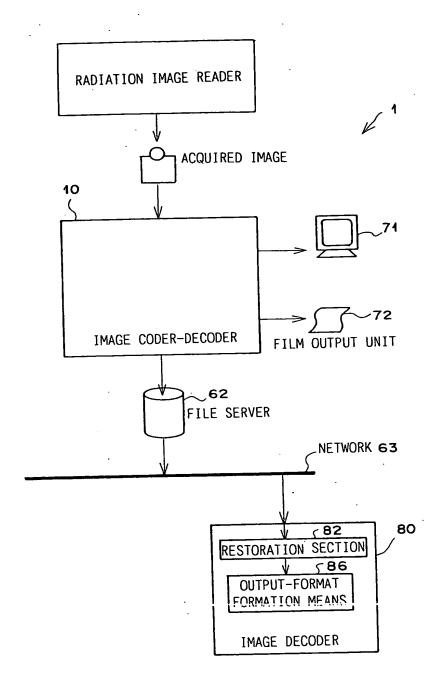FORMATION MEANS

80

IMAGE DECODER

1

F I G . 1

TAKEO   Q61223
IMAGE CODING-DECODING METHOD...
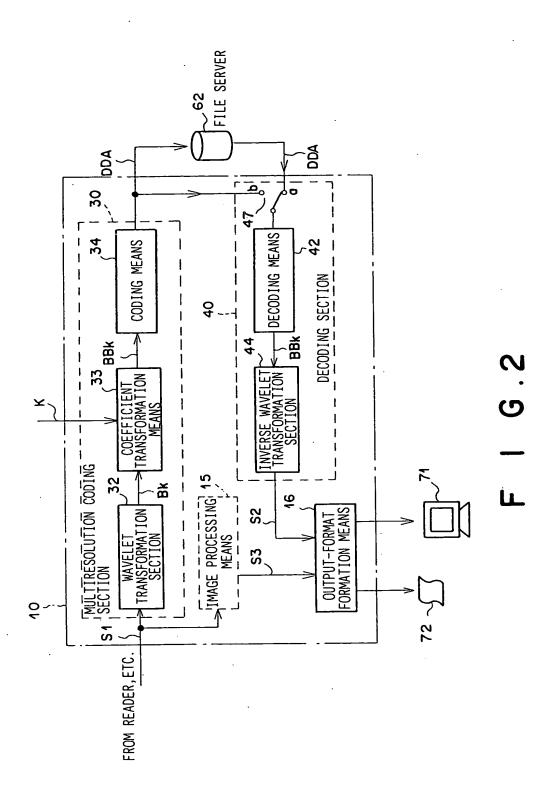Filed: February 8, 2001
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F I G . 2

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GE CODING-DECODING METHOD...
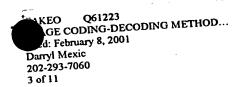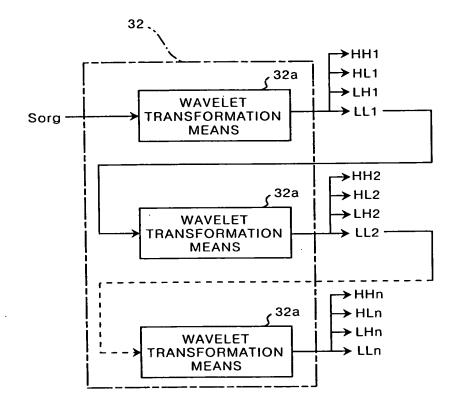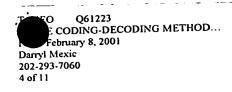d: February 8, 2001
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FIG.3

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FIG.4

HIRIZONTAL-SCANNING
DIRECTION

VERTICAL-SCANNING
DIRECTION

$$Sorg, LL_k \rightarrow \boxed{H\downarrow 2}$$

$$\boxed{H\downarrow 2} \rightarrow HH_{k+1}$$
$$\boxed{G\downarrow 2} \rightarrow HL_{k+1}$$
$$\boxed{G\downarrow 2}$$
$$\boxed{H\downarrow 2} \rightarrow LH_{k+1}$$
$$\boxed{G\downarrow 2} \rightarrow LL_{k+1}$$

H : HIGH-PASS FILTER
G : LOW-PASS FILTER

TAKEO   Q61223
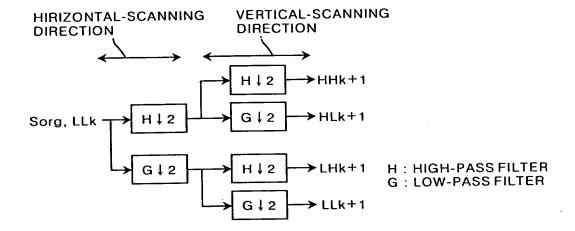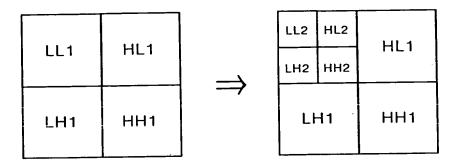IMAGE CODING-DECODING METHOD...
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LL1	HL1
LH1	HH1

$\Rightarrow$

LL2	HL2	HL1
LH2	HH2	
LH1		HH1

FIG.5A   FIG.5B

F I G . 6

OUTPUT

GRADIENT<1

GRADIENT<1

GRADIENT>1

INPUT

F I G . 7

LL2 ⇒ γ IMAGE TO BE TRANSFORMED

HL4

LL4

LH4

HH4

HL3

LH3 HH3

HL2

HL1

LH2

HH2

LH1

HH1

TAKEO   Q61223
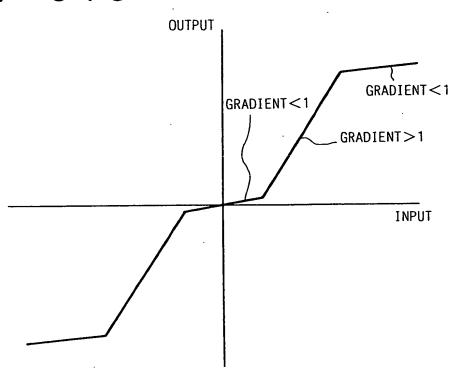IMAGE CODING-DECODING METHOD...
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FIG.8

TAKEO   Q61223
IMAGE CODING-DECODING METHOD...
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F I G.9A

LEVEL 0   LEVEL 1   LEVEL 2   LEVEL(N-1)

. . . .

CODED DATA

SPACE SCALABILITY

F I G.9B

LEVEL n

LEVEL n-1

LEVEL n-2

. . . .

LEVEL 0

CODED DATA

SPACE SCALABILITY

TAKEO   Q61223
IMAGE CODING-DECODING METHOD...
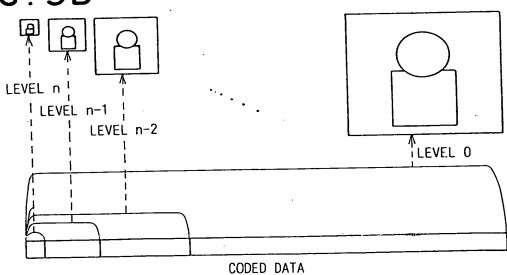Filed: February 8, 2001
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FIG.10

LLn —
LHn —
HLn —
HHn —

34 ↘

34a

INVERSE WAVELET
TRANSFORMATION
MEANS

→ LLn−1

LLn−1 —
LHn−1 —
HLn−1 —
HHn−1 —

34a

INVERSE WAVELET
TRANSFORMATION
MEANS

→ LLn−2

LL1 —
LH1 —
HL1 —
HH1 —

34a

INVERSE WAVELET
TRANSFORMATION
MEANS

→ LL0

TAKEO   Q61223
IMAGE CODING-DECODING METHOD...
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FIG.11

VERTICAL-SCANNING   HIRIZONTAL-SCANNING
DIRECTION   DIRECTION

⟷   ⟷

FIRST ADDED
SIGNAL

LLk ⟶ | ↑ 2G' |

                          | ↑ 2G' | FIRST SIGNAL

LHk ⟶ | ↑ 2H' |

                                    ⟶ LLk−1

SECOND ADDED
SIGNAL

HLk ⟶ | ↑ 2G' |

                          | ↑ 2H' |

HHk ⟶ | ↑ 2H' | SECOND SIGNAL

H' : HIGH-PASS FILTER
G' : LOW-PASS FILTER
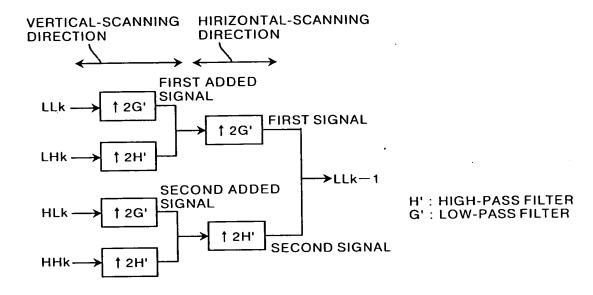
TAKEO   Q61223
IMAGE CODING-DECODING METHOD...
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F I G. 12